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POLICY DESIGN IN ACHIEVING ZERO ACCIDENTS: CASE STUDIES IN THE BUKIT INDAH CITY INDUSTRIAL ESTATE PURWAKARTA, INDONESIA

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Abstract

Policy design in achieving zero work accidents has been implemented around the world to achieve zero work accidents, the policy design has not yet reached the target. This research aims to identify the factors of non-compliance with government policies. Using a qualitative case study approach based on policy compliance theory, this research found two major challenges in achieving the target, namely the importance of a culture-based approach, and the commitment of management and employees. From the interviews, new factors were found that made the policy design difficult to implement. To achieve zero accidents, some aspects that need to be considered are a culture-based approach that focuses on real-time issues and puts forward a clear vision of zero lost incidents and the commitment of management and employees to become co-owners in the effort to achieve zero accidents.

Keywords: Policy Design; Zero Accident; Compliance; Safety Culture; Commitment.

1. Introduction

Achieving zero accidents is the primary goal of every occupational safety professional. Although this may seem like an impossible task, there are several steps that can be taken to achieve this important objective [Schneider, T, 2021]. The design of this policy aims to provide a strategic framework for the improvement of sustainable safety in any industry.

The main components of this policy design include the Vision of Zero Accidents, Safety Culture, Leadership, Commitment, and Continuous Improvement [Cali Curley, 2020]. In this policy design, we will discuss the main components of the zero-accident policy and how these components can be implemented to achieve the goal of zero accidents.

Some key components of the zero-accident workplace policy in a company include:

a) Accident-Free Vision
b) Safety Culture
c) Leadership
d) Commitment
e) Continuous Improvement.

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The government has established Law No. 1 of 1970 concerning occupational safety [Samud, S, 2020], which aims to protect workers in performing their jobs for the well-being of life, enhance production and company productivity, and ensure workplace safety. The Occupational Safety and Health Law state that the responsibility for implementing the prevention of occupational accidents lies with the company's management. Although many companies may not be fully aware of potential workplace hazards related to labor safety regulations, there are still numerous violations, necessitating supervision to prevent accidents and work-related illnesses.

Based on Government Regulation No. 2 of 2017 concerning the Development of Industrial Facilities and Infrastructure [Bappenas, 2010], it is stated that one of the industrial zones designated as a National Vital Object of Indonesia is the Bukit Indah City Purwakarta Industrial Zone.

Despite being regulated, it is evident that during the implementation of the policy on the Occupational Safety and Health Committee (P2K3) and the Procedure for the Appointment of Occupational Safety Experts, cases of work-related accidents and illnesses continue to occur in companies in the Bukit Indah City Purwakarta Industrial Zone. The occurrences of accidents and work-related illnesses in the Bukit Indah City Purwakarta Industrial Zone indicate a suboptimal performance of the P2K3. This demonstrates, in fact, that the top management through P2K3 is not sufficiently competent in understanding workplace safety and health in the company's operational areas [Waisapi, Jeffry Yuliyanto, 2022].

According to data from the Ministry of Manpower, there were 89,393 reported workplace accidents in Indonesia in 2020, resulting in 1,045 fatalities and 95,430 injuries. The most common causes of workplace accidents in Indonesia include slipping, falling, collisions with objects, as well as machinery accidents and exposure to hazardous substances.

According to data from the International Labour Organization (ILO), an estimated 2.78 million work-related deaths occurred worldwide in 2017, indicating a global occupational fatality rate of 0.78 deaths per 100,000 workers. In terms of non-fatal accidents, the ILO estimated that there were 374 million work-related injuries and illnesses globally in 2020, with an incidence rate of 11.6 per 100 workers.

According to data from the Department of Manpower and Transmigration of West Java Province, there were 14,562 workplace accidents in West Java in 2018, resulting in 551 fatalities and 14,011 injuries. The most common causes of workplace accidents in West Java included falls, collisions with objects, and machinery accidents.

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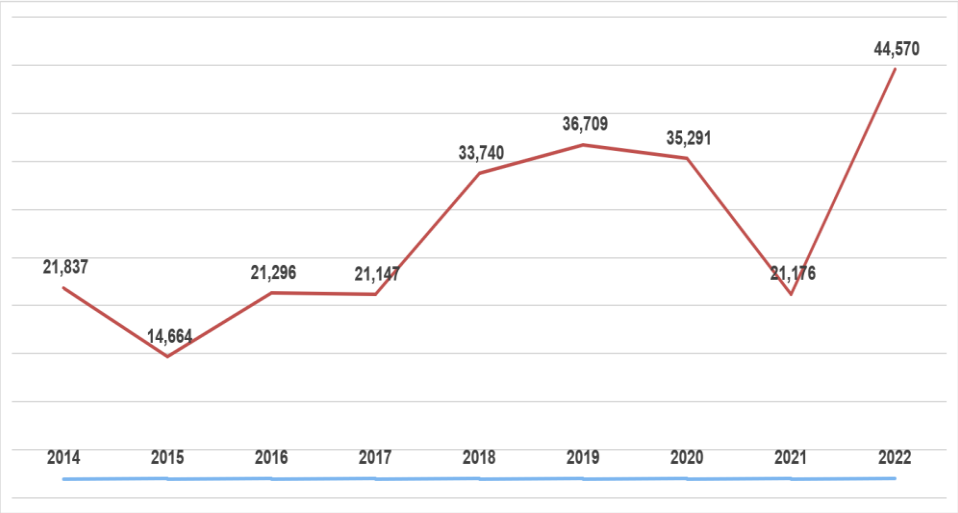

Figure 2.1 Work Accident Data in West Java

Source: BPJS (Indonesia Social Security Administrator) Employment Data

According to data from the Purwakarta Manpower and Transmigration Office, in 2018 there were 267 workplace accidents in Purwakarta, resulting in 14 fatalities and 253 injuries. The most common causes of workplace accidents in Purwakarta include falls, collisions with objects, and machinery accidents.

Workplace accidents in Purwakarta, according to data from the Social Security Administration for Manpower (BPJS Ketenagakerjaan), are notably high. This is evident from the cases reported in 2019, totaling 1,582 cases or an average of 9 cases per day. Throughout 2019, the BPJS Ketenagakerjaan Purwakarta branch disbursed approximately Rp15.3 billion in workers' accident insurance for these 1,582 cases. Meanwhile, for the death insurance program, 290 cases were covered with a value of Rp7.9 billion. Looking at national workplace accident data for the year 2019, there were 114,000 cases, and from January to October 2020, there were 177,000 workplace accident cases resulting in fatalities, material losses, moral losses, environmental pollution, decreased productivity, reduced community welfare, decreased human development index, and decreased labor development (Source: BPJS Ketenagakerjaan data, 2020).

2. METHODOLOGY

This study employs a qualitative descriptive research design or an analytical survey with a cross-sectional approach. Qualitative descriptive research can be utilized to comprehend phenomena experienced by research subjects, such as behaviors, perceptions, motivations, actions, etc., in a holistic manner, described through words and language. Meanwhile, an analytical survey with a cross-sectional approach is suitable for collecting data from respondents at a specific point in time [Lebo, M. J, 2014].

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2.1. Policy Design

A "policy design" is a document that outlines plans or strategies designed to achieve specific goals within an organization or company. It may take the form of an action plan or program developed to address issues or achieve particular objectives. Typically, a policy design includes goals, strategies, and actions to be taken to achieve those goals. Policy designs can be created for various fields, including occupational health and safety in industries, environmental issues, education, and others. Policy designs need to be carefully crafted, taking into consideration various factors that may influence the successful implementation of the policy [Rave Restrepo, J. C, 2020; Siddiki, S, 2022].

2.2. Zero accident policy

The "zero accident policy" refers to the efforts made by a company to achieve a work environment free from workplace accidents. Some companies in Purwakarta Regency have received recognition for Occupational Health and Safety (K3) because they have successfully achieved zero workplace accidents within a specific period. The K3 award is given by the Indonesian government, particularly the Ministry of Manpower, to companies that have effectively implemented a good Occupational Safety and Health Management System (SMK3) and have successfully met the target of zero workplace accidents [Zwetsloot, G. I. J. M, 2017].

Several factors contribute to workplace accidents in companies in Indonesia, including slips, falls, collisions with objects, as well as machinery accidents and exposure to hazardous substances. To achieve zero workplace accidents, organizations must identify potential hazards, assess the risks associated with these hazards, and implement an effective occupational safety and health program.

Occupational safety and health programs should encompass clear standards, risk assessment, communication, training, incident management, and effective safety techniques. Achieving zero workplace accidents requires commitment from all parties, from management to employees, to prioritize safety and health in the workplace [Işsever, H, 2008; Nai'em, M. F, 2021; Lee, J.-A, 2020].

2.3. Advocacy Coalition Framework

The Advocacy Coalition Framework (ACF) is a policy framework developed by Paul Sabatier and Hank Jenkins-Smith to address complex policy issues. ACF assumes that policymaking in modern society is so complex that participants must specialize if they hope to have an impact. The framework consists of three main components: policy subsystems, interest subsystems, and ideology subsystems. An advocacy coalition is a group of people who adhere to a specific belief system and coordinate their activities over time [Haar, R. N, 2021; Gabehart, K. M, 2022].

ACF highlights the role of policy learning, which is done through the lens of deeply held beliefs, resulting in different interpretations of facts and events within different coalitions. ACF also identifies policy brokers and rulers as actors mediating between coalitions and making authoritative decisions.

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ACF can be used to identify the beliefs and interests of actors involved in a policy issue and to understand how they collaborate to achieve their goals. This framework can also be employed to identify factors contributing to policy change and to evaluate the effectiveness of policy interventions [Vigh, M, 2017; Hoefer, R, 2023].

2.4. Zero Accident Program

The "Zero Accident Program" (*Program Kecelakaan Nihil*) is a recognition awarded by the government for Occupational Health and Safety. It is given to company management that has successfully implemented a Workplace Health and Safety program, leading to zero accidents. The Zero Accident Award is presented to companies that have effectively prevented workplace accidents without disrupting work schedules [KIM, T.-g, 2011; Yang, L, 2018].

The Zero Accident Award is conferred in the form of a certificate and a plaque, as stipulated by the Minister of Manpower of the Republic of Indonesia through an official decree.

Legal Basis for the implementation of zero accident programs in the workplace:

1. Law No. 1 of 1970 concerning Work Safety.
2. Law No. 13 of 2013 concerning Manpower.
3. Regulation of the Minister of Manpower of the Republic of Indonesia No. 5 of 1996 concerning Occupational Health and Safety Management System.
4. Regulation of the Minister of Manpower of the Republic of Indonesia No. 3 of 1998 concerning Procedures for Reporting and Examining Accidents.
5. Decree of the Minister of Manpower of the Republic of Indonesia no 463 of 1993 concerning the Pattern of the National Movement to Cultivate Occupational Safety and Health.

Criteria/category/group of companies participating in the zero-accident program in the workplace:

- Large Company: total workforce of more than 100 (one hundred) people.
- Medium-sized Company: total workforce ranging from 50 (fifty) people to 100 (one hundred) people.
- Small Company: total workforce of up to 49 (forty-nine) people.

The criteria/categories/groups of workplace accidents that result in work time loss according to the zero-accident program in the workplace:

- Loss of work time due to workplace accidents resulting from war, natural disasters, or other events beyond the company's control.
- Loss of work time due to medical processes for workers.

The zero-accident award is given to companies that have successfully prevented workplace accidents without disrupting work schedules. This recognition is presented in the form of a

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certificate and plaque, as stipulated by the Decree of the Minister of Manpower of the Republic of Indonesia [Karanikas, N, 2020]. Genuine commitment plays a crucial role in achieving zero accidents in a company [Alanko, T, 2016; Raharja, S. J, 2017].

Table 2.4.1: National Level K3 Award Data

Awards	Year								
	2014	2015	2016	2017	2018	2019	2020	2021	2022
ZERO ACCIDENT	117	122	105	34	61	84	88	83	106
SMK3*	28	79	76	162	163	168	328	289	241
P2-HIV/AIDS**	-	2	7	6	7	10	10	8	21
P2-COVID**								46	83

Source: West Java Labor Supervision Data 2022

*Occupational Safety and Health Management System; **Advisory Committee

Table 2.4.2: West Java Province K3 Award Data 2022

Types of awards				Total
ZERO ACCIDENT	P2 COVID-19	P2 HIV&AIDS	P23K*	
33	28	14	24	99 Awards

Source: West Java Labor Supervision Data 2022

*Occupational Safety and Health Advisory Committee

Table 2.4.3: Purwakarta Zero Work Accident Award Data

Source: Ministry of Manpower of the Republic of Indonesia, 2023

2.5. Research design and strategy

Research design and strategy are key steps in planning and implementing effective and meaningful research. The guidelines for designing research involve understanding the research

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objectives, determining the main goals of the research, and identifying what needs to be known or discovered through the research. Next is establishing clear and specific research questions that will be the focus of the study [Martin, F, 2020; Chen, E, 2020].

The selection of the most appropriate research type for the intended objectives may include experimental research, survey research, qualitative research, or mixed methods research, depending on the research questions under investigation [Luse, A, 2012; Mulyadi, M, 2019].

Determining the population that will be the subject of the research is crucial. This involves selecting a group or individuals relevant to the research questions. Choosing the appropriate sampling method to select a sample that represents the population can be done through random sampling, stratified sampling, convenience sampling, or other methods [Mwita, K, 2022; Kusano, K. D, 2013; Pokorny, J, 2020].

Identifying the type of data needed to answer research questions using qualitative (descriptive) data involves determining the data collection instrument to be used, such as questionnaires, interviews, observations, and document analysis [Kwiatkowski, T, 2019; Cambazoglu, B. B, 2020].

2.6. Data Collection

Planning the data collection involves organizing the schedule, location, and methods needed to collect data from respondents or research subjects. Determining the appropriate data analysis method for the collected data includes statistical analysis, qualitative analysis, or a combination of both [Mazhar, S. A, 2021; McNaughton, D. B, 2018; Matsushita, M, 2020].

Perform an analysis of the research results and interpret the findings in line with the research questions and objectives by identifying the implications of the research results for theory, practice, or policy [Jadhav, Dr. H. T, 2022]. Formulate concise conclusions based on the conducted research and present recommendations or steps that can be taken based on the findings [Bas, B. B, 2022; Wright, C, 2010; Alexandrov, A. V, 2004].

The research report is systematically and comprehensively crafted by presenting sections including the introduction, methodology, results, discussion, and bibliography [Scafuto, I. C, 2021; Dijkers, M. P, 2009].

To analyze the collected qualitative data and identify themes or theories, the case study strategy is proclaimed as the most quality instrument. This technique also advocates for a replication on the complexity features in a single view, which is the Zero Accident Program in this research. After the interviews are conducted, the researcher creates several codes and iterates them into themes regarding the research objectives [Lavarda, R. B, 2022; Trisovic, A, 2022].

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No	Informer Code	Position	Role in Zero Accident Program	Institutions
1	Inf. 1	The Department of Manpower and Transmigration, Regional Manpower Supervision Unit (Head of Regional Manpower Supervision Unit II Karawang)	Technical Implementer of the Department responsible for carrying out operational and/or specific technical support activities	Government
2	Inf. 2	The Department of Manpower and Transmigration, Regional Manpower Supervision Unit II Karawang (Manpower Supervisor of Purwakarta Regency)	Specialized technical staff from the Department of Manpower; conducting labor supervision and, if necessary, law enforcement	Government
3	Inf. 3	The Ministry of Manpower of the Republic of Indonesia, Directorate General of Manpower Inspection and Occupational Safety and Health Supervision (Director of Institutional Development for Occupational Safety and Health)	Implementing elements under and accountable to the Minister of Manpower, with the task of formulating and implementing policies in the field of labor supervision and occupational safety and health development	Government
4	Inf. 4	Occupational Safety and Health (K3) Expert from a Company in the Purwakarta Industrial Area	Technical experts with specialized skills from outside the Ministry of Manpower appointed by the Minister of Manpower to oversee compliance with Law Number 1 of 1970 concerning Occupational Safety ("UU 1/1970").	Business
5	Inf. 5	Coordinator of the Bukit Indah Purwakarta Industrial City	Entrepreneur/Owner of the Industrial Area	Business
6	Inf. 6	SMK3 (Sistem Manajemen Keselamatan dan Kesehatan Kerja) Auditor from an SMK3 Certification Body	Certification Body, conducting SMK3 audits appointed by the Minister or designated officials	Business
7	Inf. 7	Department of Manpower and Transmigration of Purwakarta Regency (Head of the Department of Manpower and Transmigration)	Government agency in the field of labor and transmigration in its working area. The functions of the Department of Manpower and Transmigration include formulating policies on labor and transmigration, implementing labor and transmigration policies, labor administration, labor and transmigration supervision, reporting, and evaluating the labor and transmigration sector	Government
8	Inf. 8	Representative of Workers' Association or Labor Union	Workers	Community
9	Inf. 9	Secretary General of the Association of Ahli K3 (Occupational Safety and Health) Associations in Purwakarta	Expert Workers	Community
10	Inf. 10	Media Manager of the Bukit Indah Purwakarta Industrial City	Media Outlet	Community

Figure 2.6: Data Informants

2.7. Data Analysis

In this research, after the interviews are conducted, the researcher takes the action of transforming the interviews into transcripts and translating them into English. This aids in analyzing and comprehending the data collected during the interviews. Throughout this entire process, it is crucial to maintain data integrity and involve transparent and ethical practices.

This includes safeguarding the confidentiality of respondent identities and ensuring that data analysis is based on accurate evidence from the analyzed transcripts. The data is then mined to understand the policy design in achieving zero accidents [Mamabolo, A, 2019; Lemmenmeier-Batinic, D, 2021].

The gathered information is categorized and examined by defining the challenges faced during the implementation of achieving zero accidents. The results are then contrasted with the research questions and policy design concepts in the literature to formulate appropriate recommendations for achieving zero accidents [Schofield, G, 2021; Pitcher, G, 2017].

The quality of a case study can be measured through several criteria and factors that influence it [Crowe, S, 2011]. Evaluation of the quality of case studies can help determine the extent to which they are reliable, relevant, and make a meaningful contribution to the understanding of a phenomenon or problem [Raharja, S. J, 2022].

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Some factors that can be used to measure the quality of case studies include:

a) Relevance and usefulness: by assessing the extent to which the case study is relevant to the research objectives and the issues under investigation. Can the results and findings of the study contribute to a better understanding of a particular phenomenon or issue [Termeer, C. J. A. M, 2019].

b) Accuracy in Data Collection: used to find out how data is collected in the case study. Is the data collection method consistent and accurate and can the quality of the collected data affect the validity of the study results [Jamie, K, 2022].

c) Richness and Strength of Data: Does the case study gather data from various sources and perspectives? The more diverse the collected data, the stronger and richer the study results [Yin, R. K, 2008].

d) Accuracy of Analysis: How is the data analyzed in the case study? Is the analysis conducted critically and aligned with the research questions? Does the study's author provide strong justifications for each interpretation or finding [Widianingsih, I, 2020].

e) Methodological Appropriateness: Is the method used suitable for the type of case study research conducted? The method should be chosen appropriately to address the research questions and fulfill the study's objectives [Avery, A. J, 2011].

f) Replicability: Can this case study be replicated by other researchers? The clearer the steps taken, and the methods used, the easier it is for other researchers to replicate the study with similar results [Guttinger, S, 2020].

g) Credibility and Validity: Can this case study be trusted? Have steps been taken to ensure the credibility of data and results and has this been done well [Widianingsih, I, 2007].

h) Representativeness: To what extent does this case study represent a broader case or a more general phenomenon? Representativeness is crucial to ensure that the study's results can be applied to a broader context [Henriksen, T, 2021].

i) Strong Conceptual Framework: Is the case study based on a clear and relevant conceptual framework? A conceptual framework assists in guiding the research and interpreting the results [Johnson, J. L, 2020].

j) Adequacy and Accuracy of References: Is this case study supported by sufficient and relevant literature? Good references can strengthen the arguments and findings of the study [Faccia, A, 2023].

k) Openness to Bias: Does the study's author identify and consider potential biases in the design and analysis? Openness to bias can enhance the integrity of the results [Andaur Navarro, C. L, 2021].

l) Implications and Contributions: Do the study results have practical implications or significant theoretical contributions? Studies that provide new perspectives or deeper understanding tend to have a greater impact [Sant, M, 2019; Vartanian, O, 2018].

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By considering these factors, researchers and readers can assess the quality of a case study and determine how reliable and valuable the study is.

3. RESULTS

The researcher found several critical findings based on in-depth interviews developed in this research. These perspectives were taken to create an understanding of the policy design in achieving zero accidents in the industrial area of Bukit Indah City Purwakarta. These findings were adopted as a framework to propose the factors driving the zero-accident program to achieve its targets. A summary of the results can be seen in Figure 3.1 below.

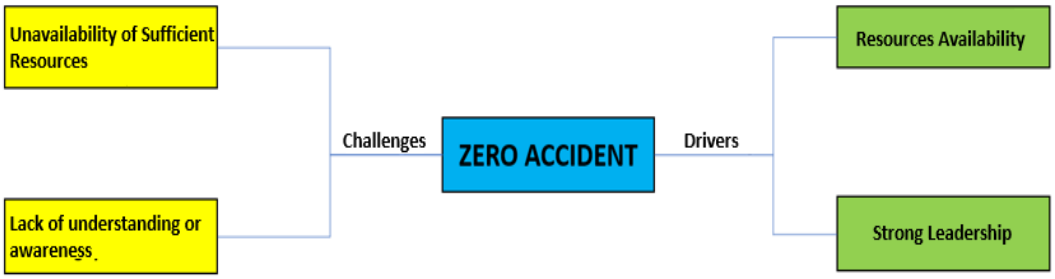

Figure 3.1 Conceptual Model of Zero Accident Achievement

3.1. Challenges

3.1.1. Resources

The lack of sufficient resources is one of the main challenges in achieving the "zero accident" goal in companies [Kryvenko, G. M, 2021]. Resources, including time, budget, manpower, technology, and tools needed to improve workplace safety, can be significant obstacles [Widyanty, W, 2020].

Some ways to address these challenges begin with allocating sufficient budgets. Company management must recognize the importance of investing in workplace safety as an integral part of operations. Allocating adequate budgets for safety training, safe equipment, facility maintenance, and other safety programs is a crucial step [Edwin Jo M. Jardin, 2023; Roy, S, 2020].

Furthermore, prioritizing safety is essential, meaning that safety should be given a high priority in corporate decision-making. This implies that resources should be allocated to support safety initiatives, even if there is competition with other needs [Zhao, D, 2016].

Efficiency in resource utilization plays a role in optimizing resource use, and this step is crucial. It may involve reducing waste and utilizing technology to maximize operational efficiency [Kiangala, K. S, 2022].

Additionally, increasing awareness within management is also crucial. Management needs to understand that investing in workplace safety is not a cost but a long-term investment that can reduce short-term costs associated with accidents and injuries [Kim, H, 2021] [Yam, F, 2017].

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External partnerships are very useful in forming collaborations with external institutions or organizations, such as government agencies or non-profit groups focused on workplace safety. This can help in obtaining additional resources, support, and guidance [Patriotta, G, 2021].

Furthermore, the use of technology is essential as it can enhance the efficiency and effectiveness of safety programs. Utilizing advanced tools such as sensors, reporting software, and tracking systems can aid in identifying risks and minimizing the potential for accidents [Olak, A. J, 2021; Dobrucali, E, 2021].

Training and awareness programs are necessary to enhance the awareness and training of workers regarding the importance of workplace safety. This can help reduce the risk of injuries, as workers who are aware of the risks are more likely to avoid risky behaviors [Wang, Z, 2021; Zaman, F, 2021].

Continuously developing internal skills, such as enhancing risk management and workplace safety skills, can help the company manage these challenges more effectively without relying on costly external resources [Osatis, C, 2022; Plant, K, 2021].

Using data and analysis to identify areas that need improvement can help allocate resources intelligently and based on real needs, thus enhancing effectiveness [Musungwa, T, 2022; Nguyen, T, 2020]. Most importantly, employee participation, which involves engaging employees in safety efforts, such as forming safety teams or providing input on safety programs, can create an environment where employees contribute to solutions in an effective manner [Ghahramani, A, 2022; Nævestad, T. O, 2021; Hui-Nee A, 2014].

Although resource unavailability can be a hindrance, with the right approach and strong commitment from management and employees, many challenges can be overcome. The "zero accident" goal can still be achieved through sustained efforts and well-planned strategies.

3.1.2. Lack of Understanding or Awareness

The lack of understanding or awareness of occupational safety is a serious challenge in achieving the "zero accident" goal in a company. Low awareness of potential risks and risky behaviors can lead to preventable accidents and injuries. Changes in a successful organizational business are inseparable from factors such as leadership roles, communication strategies, stakeholder management, motivation, the development of change interventions, and stakeholder management in personal attitudes. These factors are closely interconnected and mutually support each other [Maliha, M. N, 2021; Abukhashabah, E, 2020].

The steps that can be taken to overcome this challenge include conducting effective safety training by organizing comprehensive and effective workplace safety training for all employees. Training should cover information about potential risks, preventive measures, and safe practices [Comu, S, 2021].

The next step is open and clear communication by communicating the importance of workplace safety and the associated risks in a clear and open manner at all levels of the organization. The use of visual communication or real-life demonstrations of risks can help improve understanding [Herbst, S, 2022].

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Safety counseling and campaigns become essential by organizing regular counseling sessions, seminars, or safety campaigns to continuously build awareness and understanding of workplace risks and the importance of safe practices while working [Daerego I, 2022] [Faus, M, 2021].

Worker participation is crucial in achieving zero accidents by involving workers in the development of safety policies and practices, which can enhance their sense of ownership and awareness of the need to behave safely [Su, W.-J, 2021; Ansori, N, 2021].

Emphasizing personal impact by illustrating the personal consequences of accidents or injuries through real stories or case examples can help make workers more aware of the risks they face. This can be disseminated to every worker or used as a learning material [Olcay, Z. F, 2021; Kao, K. Y, 2019].

Awards and recognition play a key role in engaging leaders and workers as motivators by acknowledging and appreciating individuals or teams contributing to workplace safety. This can serve as an incentive for other workers to be more concerned about safety [Nasima, A, 2018; Inarda, A, 2022].

The role of modeling, often referred to as setting an example, involves management and company leaders being exemplary in safe behavior. If leaders practice safety and prioritize it, employees are more likely to follow their lead [Jame Chenarboo, 2022; Harsini, A. Z, 2021].

Constructive feedback has its own impact in achieving zero accidents, which involves providing constructive and consistent feedback to workers regarding safe behavior or necessary improvements. This can help them understand the implications of their actions [Dinagaran, D, 2022].

The educational approach, often known as learning, involves using an educational method that provides a deep understanding of risks and their consequences, rather than merely enforcing rules without adequate explanation [Mazzuto, G, 2022].

Measuring and monitoring the awareness and participation levels of workers can be done by periodically assessing the level of safety awareness and monitoring changes in behavior and attitudes related to safety. This can help identify necessary improvements [Adamo, N, 2022].

Increasing awareness of workplace safety requires sustained effort and commitment from all levels within the organization. Changing the safety culture and helping workers understand that safety is a shared responsibility will be a crucial step in addressing this challenge.

3.2. Driving Factors

3.2.1 Resources Availability

Available resources play a key role as driving factors in achieving the "zero accident" goal in companies. Resources, including budget, time, labor, technology, and management support, can provide significant impetus in implementing a successful safety program [Zhang, L, 2023]. The way in which available resources can support the achievement of zero accident goals begins with providing competent, structured, and effective training and education. Resources can be allocated to effective safety training, including training on safe work procedures, proper

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equipment usage, and knowledge of risks and preventive actions [Babalola, A, 2023].

Safety equipment must be provided by the company for its workers. Preparing and maintaining appropriate safety equipment helps reduce the risk of accidents. Personal protective equipment, fire prevention equipment, and other safety tools require sufficient resources [Phuc, L. T. H, 2019].

Technology and Innovation: Investment in technology that supports workplace safety, such as safety sensors, risk measurement tools, or incident reporting devices, can help detect and address risks more quickly and effectively [Winiarski, S, 2021].

a) Reporting and Analysis System: Managing data and incident reporting requires resources to ensure that all incidents are accurately recorded and analyzed to identify root causes and patterns [Abe, T, 2022].

b) Risk Management: Preparing and managing risk management plans requires sufficient resources. This involves identifying risks, developing preventive measures, and planning responses to incidents [Bahamid, R. A, 2022].

c) Safety Education and Campaigns: Organizing training, seminars, or safety campaigns requires resource support to effectively convey information and reach all employees [Fajar, M, 2022].

d) Development of Safety Policies and Processes: Developing and implementing effective safety policies, procedures, and guidelines requires resource allocation in the planning and implementation process [Ávila-Gutiérrez, M. J, 2022].

e) Provision of Safe Facilities: Ensuring that facilities and workplaces have a safe and adequate design, including warning signs and evacuation routes, requires resources for planning and implementation [Bae, H., Simmons, D. R, 2022].

f) Tracking and Continuous Monitoring: Collecting and analyzing safety-related data, as well as tracking changes in behavior and risky actions, requires resources for an effective monitoring system [Colopy, M. W, 2019].

g) Management Participation: Company management should provide resource support in the form of budget, time, and commitment to instill a strong safety culture and set a good example [Shi, H, 2023].

Adequate resources enable the company to run safety programs effectively, address challenges, and minimize the risk of accidents. With proper support, the "zero accident" program has a greater chance of success.

3.2.2. Strong Leadership

Misunderstanding or lack of awareness regarding strong leadership plays a crucial role as a driving factor in achieving the "zero accident" goal in the company. The active role and commitment of management and leadership in supporting workplace safety programs and creating a positive safety culture are essential to achieve the desired outcomes.

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Strong leadership can support efforts to achieve "zero accidents" through leading by example. Corporate leaders should set an example in safe behavior. If they consistently adhere to safety rules, other workers are likely to follow their lead [Cheung, C. M, 2021].

In addition, active support is another way to achieve strong leadership. Management should provide tangible and measurable support for safety programs. This includes allocating sufficient resources, including budget and personnel, to run the program [Cheung, C. M, 2021].

Long-term commitment should also be planned. Leaders must demonstrate a long-term commitment to workplace safety, not just as a temporary response to incidents or external pressures. Additionally, participation in risk assessments should be carried out. Company leaders should actively engage in identifying and assessing risks in the workplace. This allows them to plan appropriate preventive actions [Niu, L, 2022].

Effective communication is often overlooked. Leaders should communicate openly and clearly about the importance of workplace safety and expectations for safe behavior [Mohamed Fiah, A. F, 2022].

The company conducts regular counseling and training. Leading counseling and training on workplace safety demonstrate commitment to the safety program and have a positive influence on employees [Passmore, J, 2015].

Awarding employees is highly recommended. Recognizing and rewarding individuals or teams who contribute to workplace safety can serve as an incentive for other employees to adopt safe behaviors [Lakronová, D, 2022].

Supervision and feedback are also key programs conducted by government supervisors. Leaders should be involved in supervising and providing feedback on safety behaviors. This can help reinforce a safety culture [Xu, Q, 2019].

Data-Driven Decision Making is more important than assumption-based. Strong leaders make decisions based on relevant data and information. This helps in planning actions that have a positive impact on occupational safety [Baardman, L, 2023].

Participatory Culture is always associated with educational and cultural background. But if creating a participatory culture where employees feel heard and contribute to safety programs can help in integrating safety awareness and commitment into every aspect of work [Keltie, E, 2017].

Reaction to incidents must be quick and responsive. A quick and appropriate response from management to a safety incident or violation shows that they are serious about maintaining a safe working environment [Sattari, F, 2022].

Strong leadership influences the attitude, behavior, and culture of the organization as a whole. By having leaders who support and prioritize safety, companies have a greater chance of achieving "zero accident" goals and creating a safe work environment for all.

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4. DISCUSSION

The forms of corporate participation in the Bukit Indah Industrial City in Purwakarta include participating in occupational safety and health programs in accordance with Government Regulation Number 50 of 2012. The company's involvement in achieving zero accidents in compliance with the occupational safety and health policy design is still very minimal. As a result, the majority of companies have not received awards for zero accidents and are not well-informed about the policy design to achieve zero accidents with the target towards the realization of *Indonesia Emas* (Golden Indonesia) in 2045.

The involvement of company leaders in achieving zero-accident awards is diminishing over time due to the company's other priorities and activities [Matkin, D. B, 2010]. Some also believe that it is the sole responsibility of occupational safety and health experts, leading some companies to employ only one occupational safety and health expert to oversee hundreds or even thousands of workers. Collaborative implementation of occupational safety and health (OSH) activities has many benefits and potential to support the achievement of the "zero accident" goal in companies. Collaborating in OSH efforts can have a significant positive impact.

Benefits that companies gain from jointly implementing occupational safety and health (OSH) activities include:

a) Collective Support: When all team members or employees are involved in occupational safety and health (OSH) efforts, they provide collective support for safety goals. This creates an atmosphere where safety is not just an individual responsibility but a shared one.

b) Increased Awareness: Engaging in occupational safety and health (OSH) activities together can enhance collective awareness of risks and hazards in the workplace. Workers are more likely to detect potential risks and avoid risky behaviors.

c) Deeper Understanding: Collaboration in discussions or OSH training enables the exchange of knowledge and experiences. This can help workers gain a deeper understanding of risks and how to manage them.

d) Increased Employee Engagement: Involving employees in the planning and implementation of OSH programs can enhance their engagement in the process. They feel a sense of ownership in creating a safe working environment.

e) Improvement in Safety Culture: Collaborating in OSH efforts can help build a stronger safety culture. When everyone participates, safety becomes a deeply shared value.

f) More Creative Problem Resolution: Through collaboration, workers can offer each other creative suggestions and solutions to overcome safety challenges. This opens up opportunities to discover new approaches.

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g) Continuous Improvement: In collaboration, continuous evaluation and improvement of the OSH program become more feasible. Shared experiences and knowledge can help identify areas that need enhancement.

By integrating the principles of collaboration and participation into the OSH program, companies can create a safer work environment, achieve the "zero accident" goal, and ensure the overall well-being and health of employees.

5. CONCLUSIONS

Based on the analysis and field findings related to the policy design for achieving zero accidents in the Bukit Indah Industrial City in Purwakarta, optimal workplace safety is an absolute prerequisite for achieving efficiency, productivity, and the well-being of employees in a company. To realize the "zero accident" goal, a holistic approach involving the entire organization, from management to employees, is essential. A robust and comprehensive policy design will be the primary foundation in directing efforts towards a workplace free from accidents.

Achieving zero accidents in a company requires a comprehensive policy design. Commitment to safety must be undertaken by everyone in the organization, from top management to new employees, who should prioritize safety as their number one commitment.

Clear Standards and Training should be established based on clear safety performance standards in the workplace. Ensure that employees understand the regulations and train them effectively and regularly.

Leadership and Employee Involvement are also key to any activity. Supervisors should lead by example and involve employees in safety planning and feedback.

Continuous Improvement to view accident prevention as a continuous challenge, always making improvements, setting new safety goals, and steadily making progress toward them.

A Clear Zero Accident Vision can stimulate an ethos and define a sense of effort to achieve a series of goals. It suggests that all accidents can be prevented and provides a basis for learning from previous accidents and improving processes, products, and attitudes.

A strategic approach to safety is crucial for continually improving safety as a total focus to achieve and maintain the goal of zero accidents.

Be vigilant about the surrounding environment, identify workplace hazards, and create a safe working area with good layout and adequate exit routes.

Learning and Continuous Improvement: Based on safety management systems, continuous learning and improvement are crucial for reducing workplace accidents.

In conclusion, achieving zero accidents in a company requires a combination of a clear vision, leadership, employee involvement, continuous improvement, and a strategic framework for safety. It is a challenging goal but can be attained, necessitating a holistic and determined safety management approach.

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